CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-12/523/CEMENT/2017-18 Date: 22.12.2017

TEST REPORT ON CEMENT

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Sample ID	:	Cement – Sample 2
Sample Received on	:	21.12.2017
Period of Testing	:	21.12.2017 to 22.12.2017

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

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Technical Manager

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T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-12/523/SAND-Gradation/2017-18 22.12.2017

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Sample ID	: Fine Aggregates – Sample 2
Technical Reference	: IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	: 21.12.2017
Date of Testing	: 22.12.2017

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	97.50	90-100	90-100	90-100	95-100
2.36	77.50	60-95	75-100	85-100	95-100
1.18	56.50	30-70	55-90	75-100	90-100
600 Micron	37.50	15-34	35-59	60-79	80-100
300 Micron	19.50	5-20	8-30	12-40	15-50
150 Micron	7.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-12/523/AGG/GR/2017-18 22.12.2017

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Sample ID	:	Coarse Aggregates (40mm) – Sample 2
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	21.12.2017
Date of Testing	:	22.12.2017

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.54	95-100	85-100
20	40.28	30-70	0-20
10	19.28	10-35	0-5
4.75	3.58	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/KRIDL/W.No.13/Steel/2017-18 22.12.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Samples ID	:	10 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	22.12.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	10	0.62	512	553	13.15	O.K	O.K

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/KRIDL/W.No.13/Steel/2017-18 22.12.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Samples ID	:	12 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	22.12.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	12	0.89	516	557	13.45	O.K	O.K

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ಕೆಲಸ ಮಾಡಲು, ಆದೇಶ ದಿನಾಂಕ
ಬಿಡುವ ದಿನಾಂಕ ಮೊದಲಾದ ಪಾಲಿಕೆ
ಪಾ.ಎಂ. ಬಿಲ್ಲೆ, ಬೆಂಗಳೂರು, ಬಂಗಳೂರು

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Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-12/523/Cube/2017-18 22.01.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of the work	:	Construction and Improvements of culverts in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/143/2017-18 Dated: 21.12.2017
* Sample ID	:	Culvert Raft Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	22.01.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.12.2017	22.01.2018	8.102	485.6	21.58
2	25.12.2017	22.01.2018	8.220	506.5	22.51
3	25.12.2017	22.01.2018	8.308	518.5	23.04

*Information is furnished by the Customer/Representative.

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ಬಾಸವೇಶ್ವರ ನಗರ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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